

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A ~~magnetic resistance device~~bicycle trainer, comprising:
a stationary frame configured to support a driven wheel of a bicycle; and
a resistance unit mounted to the frame, wherein the resistance unit
5 comprises a housing supported by the frame; a roller rotatably mounted to the housing,
wherein the roller is configured to engage the driven wheel of the bicycle for rotation in
response to rotation of the driven wheel; a stationary electrically conductive member
interconnected with the housing, a rotatable member rotatably mounted to the housing
and adapted to rotate in response to an input rotation of the roller caused by rotation of the
10 driven wheel, and an automatically variable magnetic resistance arrangement carried by
the rotatable member which interacts with the ~~rotatable member~~ stationary electrically
conductive member to provide eddy current resistance to the ~~input~~ roller through the
rotatable member, wherein the automatically variable magnetic resistance arrangement is
15 operable to provide an automatically variable non-linear relationship between the speed
of the rotatable member and the resistance provided to the ~~input~~ roller in response to the
speed of rotation of the rotatable member.

2. (Currently Canceled)

3. (Currently Amended) A ~~resistance unit for an exercise device~~bicycle trainer, comprising:

a frame configured to support a bicycle having a driven wheel; and

- _____ a resistance device secured as a unit to the frame, wherein the resistance
- 5 device comprises:
- _____ a housing supported by the frame;
- _____ a roller rotatably supported by the housing, wherein the roller is
- arranged to engage the driven wheel of the bicycle for rotation in response to rotation of
- the driven wheel;
- 10 _____ a rotatable member rotatably supported by the housing and
- interconnected with the roller for rotation in response to rotation of the driven wheel,
- wherein the rotatable member is rotatable about an axis of rotation in response to rotation
- of the driven wheel;
- _____ an stationary electrically conductive member ~~located~~ mounted to the
- 15 housing adjacent the rotatable member; and
- _____ one or more magnetic members movably mounted to the rotatable
- member, wherein the magnetic members are movable relative to the stationary
- electrically conductive member and relative to the axis of rotation in response to
- variations in the speed of rotation of the rotatable member;
- 20 _____ wherein the one or more magnetic members and the electrically
- conductive member cooperate to form an eddy current force which resists rotation of the
- rotatable member and which thereby resists rotation of the roller and the driven wheel,
- wherein movement of the one or more magnetic members relative to the stationary
- electrically conductive member functions to alter the location of the eddy current force
- 25 relative to the axis of rotation to vary the resistance to rotation of the rotatable member
- in response to the speed of rotation of the rotatable member caused by rotation of the
- roller and the driven wheel.

4. (Currently Amended) The ~~resistance unit~~ bicycle trainer of claim 3,
wherein the rotatable member comprises a flywheel mounted to a shaft which in turn is
~~engaged with an input member~~ interconnected with the roller, and wherein the input

5 ~~member-roller~~ is adapted to be engaged by a ~~the driven wheel of the bicycle wheel~~ such that the flywheel imparts resistance to rotation of the ~~bicycle-driven~~ wheel.

5. (Currently Amended) The ~~resistance-unit bicycle trainer~~ of claim 3, wherein the one or more magnetic members are each located within an open groove associated with the rotatable member, and further including a retainer positioned over the open groove to retain the magnetic member within the groove.

6. (Currently Amended) The ~~resistance-unit bicycle trainer~~ of claim 5, wherein the magnetic member is slidably retained ~~in the widened portion defined by~~ within the groove.

7. (Currently Amended) The ~~resistance-unit bicycle trainer~~ of claim 5, further comprising a biasing member positioned within a ~~narrowed portion defined by the~~ groove, wherein the biasing member engages the magnetic member to bias the magnetic member radially inwardly.

8. (Currently Amended) The ~~resistance-unit bicycle trainer~~ of claim ~~3~~26, wherein the electrically conductive member comprises a disc-shaped member located adjacent the rotatable member.

9. (Currently Amended) The ~~resistance-unit of claim 8, further comprising~~ A resistance unit for an exercise device, comprising:

a rotatable member, wherein the rotatable member is rotatable about an axis of rotation;

5 a disc-shaped electrically conductive member located adjacent the rotatable member;

a magnetically attractive member mounted to the disc-shaped member to direct the magnetic flux of the magnetic member through the disc-shaped member; and

10 one or more magnetic members movably mounted to the rotatable member, wherein the magnetic members are movable relative to the axis of rotation in response to variations in the speed of rotation of the rotatable member;

_____ wherein the one or more magnetic members and the electrically conductive member cooperate to form an eddy current force which resists rotation of the rotatable member, wherein movement of the one or more magnetic members functions to alter the
15 location of the eddy current force relative to the axis of rotation to vary the resistance to rotation of the rotatable member in response to the speed of rotation of the rotatable member.

10. (Currently Amended) ~~The resistance unit~~bicycle trainer of claim 3, wherein the rotatable member includes a plurality of vanes which circulate air upon rotation of the rotatable member .

11. (Currently Amended) ~~The resistance unit of claim 10~~ A resistance unit for an exercise device, comprising:

_____ a rotatable member, wherein the rotatable member is rotatable about an axis
of rotation;

5 _____ an electrically conductive member located adjacent the rotatable member;
and

_____ one or more magnetic members movably mounted to the rotatable member, wherein the magnetic members are movable relative to the axis of rotation in response to variations in the speed of rotation of the rotatable member;

10 _____ wherein the one or more magnetic members and the electrically conductive member cooperate to form an eddy current force which resists rotation of the rotatable member, wherein movement of the one or more magnetic members functions to alter the location of the eddy current force relative to the axis of rotation to vary the resistance to rotation of the rotatable member in response to the speed of rotation of the rotatable
15 member;

_____ wherein the rotatable member includes a plurality of vanes which circulate air upon rotation of the rotatable member, and wherein the rotatable member is contained within a housing having a plurality of openings to allow circulation of air through the housing upon rotation of the rotatable member.

12. (Currently Amended) The ~~resistance unit~~ bicycle trainer of claim 3 wherein the electrically conductive member comprises a primary wall located adjacent a side of the rotatable member and an outer flange located radially outwardly of the rotatable member.

13. (Currently Amended) The ~~resistance unit~~ bicycle trainer of claim 3, wherein each magnet is movably mounted to a radially extending support that extends outwardly from a hub section defined by the rotatable member, wherein each magnet is biased inwardly toward the hub section and is moved outwardly against the inward bias
5 by centrifugal force caused by rotation of the rotatable member.

14. (Currently Amended) The ~~resistance unit~~ bicycle trainer of claim 3 wherein the rotatable member is formed of a non-magnetic material.

15. (Currently Amended) The ~~resistance unit~~ bicycle trainer of claim 14, wherein each magnetic member is positioned within a groove defined by the rotatable member, and is maintained in position on the rotatable member by means of a non-magnetic cover arrangement secured to the rotatable member over the groove.

16. (Currently Amended) A bicycle training apparatus, comprising:

a) a support frame adapted to support a bicycle having ~~at least one~~ a driven
wheel; and

b) a resistance unit attached to the support frame, wherein the resistance
5 unit includes a housing, a roller rotatably supported by the housing and engageable with a the driven wheel of the bicycle wheel, a shaft extending outwardly from the roller, a stationary electrically conductive member secured to the housing, and a rotatable member attached to the shaft and located adjacent the ~~rotatable~~ stationary electrically conductive member, wherein the roller, the shaft and the rotatable member rotate about an axis of
10 rotation, and wherein the rotatable member having has at least one radially outwardly movable magnetic element that interacts with the stationary electrically conductive member to establish a resistive eddy current force upon rotation of the rotatable member, wherein the magnetic member is radially movable relative to the axis of rotation in

15 response to the speed of rotation of the rotatable member caused by rotation of the driven wheel of the bicycle wheel to resist rotation of the bicycle wheel.

17. (Original) The bicycle training apparatus of claim 16, wherein outward movement of the magnetic element is resisted by a biasing member that engages the magnetic element.

18. (Original) The bicycle training apparatus of claim 17 wherein the biasing member is a spring.

19. (Original) The bicycle training apparatus of claim 16 wherein the rotatable member comprises a flywheel having a number of vanes to circulate air relative to the conductive member.

20. (Original) The bicycle training apparatus of claim 19 wherein the vanes are positioned at an angle with respect to the axis of rotation of the rotatable member.

21. (Currently Amended) An exercise method for providing resistance to a bicycle wheel rotatably secured to a bicycle trainer, the method, comprising the steps acts of:

providing a bicycle having a driven wheel;

5 a) providing a bicycle trainer having a wheel engaging frame assembly and a resistance unit, the resistance unit including a housing; a stationary electrically conductive member mounted to the housing, a shaft rotatably mounted to the housing, wherein the shaft is connected to a wheel-engaging roller and to a rotatable member, the rotatable member including at least one support, the at least one support having at least
 10 one slidable movable magnetic element located adjacent the stationary electrically conductive member that is urged radially inwardly by a biasing member;

b) engaging the driven wheel of the bicycle with the wheel engaging frame assembly so that the driven wheel is supported by the frame assembly and the driven wheel of the bicycle roller such that the wheel rotatably contacts the roller;

15 c) rotating the driven wheel of the bicycle to rotate the roller, the shaft and the rotatable member about an axis of rotation, wherein the magnetic element interacts

with the stationary electrically conductive member to establish an eddy current force that
resists rotation of the rotatable member and thereby the bicycle wheel; and
 _____ wherein radial movement of varying the radial position of the magnetic
 20 element relative to the axis of rotation against the force of the biasing member in
response to variations in the speed of rotation of the rotatable member caused by
variations in the speed of rotation of the driven wheel of the bicycle, functions to vary
wherein the act of varying the radial position of the magnetic element relative to the
stationary electrically conductive member functions to vary the radial position of the
 25 eddy current force to vary the degree of resistance to rotation of the rotatable member.

22. (Currently Canceled)

23. (Currently Canceled)

24. (Currently Canceled)

25. (New) The bicycle trainer of claim 1, wherein the automatically
 variable magnetic resistance arrangement comprises at least one radially movable magnet
 carried by the rotatable member, and wherein the stationary electrically conductive
 member includes a radially outwardly extending surface that is axially spaced from the at
 5 least one radially movable magnet, wherein the radially outwardly extending surface of
 the conductive member lies in a plane that is parallel to the direction of movement of the
 at least one radially movable magnet.

26. (New) The bicycle trainer of claim 3, wherein the one or more
 magnetic members are mounted to the rotatable member for radially inward and outward
 movement relative to the axis of rotation in response to variations in the speed of rotation
 of the rotatable member, and wherein the stationary electrically conductive member
 5 includes a radially outwardly extending surface that is axially spaced from the one or
 more magnetic members, wherein the radially outwardly extending surface of the
 conductive member lies in a plane that is parallel to the direction of movement of the one
 or more magnetic members.

27. (New) The bicycle training apparatus of claim 16, wherein the radially outwardly movable magnetic element is mounted to the rotatable member for radially inward and outward movement relative to the axis of rotation in response to variations in the speed of rotation of the rotatable member, and wherein the stationary electrically
5 conductive member includes a radially outwardly extending surface that is axially spaced from the magnetic element, wherein the radially outwardly extending surface of the conductive member lies in a plane that is parallel to the direction of movement of the magnetic element.

28. (New) The method of claim 21, wherein the stationary electrically conductive member includes a radially outwardly extending surface that is axially spaced from the magnetic element and parallel to the direction of movement of the magnetic element, and wherein the act of varying the radial position of the magnetic element is
5 carried out by varying the radial position of the magnetic element along the radially outwardly extending surface of the electrically conductive member in response to variations in the speed of rotation of the driven wheel of the bicycle.